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EXAMINER	
HOLDER, ANNER N	

ART UNIT	PAPER NUMBER
2483	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/543,044	RAMASWAMY ET AL.	
	Examiner	Art Unit	
	ANNER HOLDER	2483	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 September 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 July 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 09/20/10 have been fully considered but they are not persuasive. The Examiner respectfully disagrees with the Applicant and maintains the rejection set forth in the Office Action mailed 04/02/10. As to Applicant's arguments concerning claim1, cited prior art Matsushima teaches the limitation as presented. Matsushima teaches the second encoder is more robust than the first encoder designed for compression of high resolution images. [fig. 3; fig. 5 (5a, 5b); col. 9 lines 5-14, 42-50] The signal quality is factored into the compression of the image including the delay and multiplexing. [col. 9 lines 40-60] The first and second encoded signals are not multiplexed after compression using additional channels. Rather, the two signals are multiplexed in the time domain, interleaving the two signals into one coherent MPEG compressed stream.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 7-8, and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsushima et al. US 6,535,717.

4. As to claim 1, Matsushima teaches a method for staggercasting, [abstract; figs. 3-5; col. 8 lines 31-40] comprising the steps of encoding a first signal representing content; [fig. 3; fig. 5 (5a, 5b); col. 9 lines 5-14, 42-50] encoding a second signal representing the content using encoding relatively more robust than the encoding of the first encoded content representative signal; [fig. 3; fig. 5 (5a, 5b); col. 9 lines 5-14, 42-50; encoder encodes the second signal with a robust technique being a lower resolution encoding] generating a composite signal comprising the first and second encoded signals [abstract; fig. 3; fig. 5; col. 8 line 56 - col. 9 line 19 (emphasis col. 9 lines 9-14 - the delay staggers the signals in time)] by multiplexing the first and second encoded signals in the time domain, [col. 9 line 40 - col. 10 line 21] wherein one of the first and second encoded signals is delayed with respect to the other encoded signal; [abstract; fig. 3; fig. 5; col. 8 line 56 - col. 9 line 19 (emphasis col. 9 lines 9-14 - the signal is delayed] and decoding the undelayed encoded signal to reproduce the content if an error is detected in the composite signal, [fig. 5 (1, 2, 5b); col. 9 lines 1-19] and decoding the delayed encoded signal is to reproduce the content otherwise. [fig. 5 (1 and 4); fig. 7 (1 and 4); col. 9 lines 1-19]

5. As to claim 2, Matsushima teaches the steps of encoding the first and the second content representative signal comprise source encoding the content representative signal, [fig. 3; fig. 5 (5a, 5b); col. 9 lines 5-14, 42-50] and channel encoding the system and source encoded content representative signal. [fig. 3; fig. 5 (5a, 5b); fig. 7; col. 9 lines 5-14, 42-56]

6. As to claim 7, Matsushima teaches the step of encoding the first content representative signal comprises generating a first encoded signal which is backwards compatible [fig. 3; fig. 5 (5a, 5b); col. 9 lines 5-14, 42-50] and the step of generating a composite signal comprises the step of delaying the second encoded signal with respect to the first encoded signal. [abstract; fig. 3; fig. 5; col. 8 line 56 - col. 9 line 19 (emphasis col. 9 lines 9-14 - the signal is delayed]

7. As to claim 8, Matsushima teaches an input terminal capable of receiving a composite signal [fig. 6; fig. 7 (41); col. 12 lines 30-67] comprising a first encoded signal representing content [fig. 3; fig. 5 (5a, 5b); col. 9 lines 5-14, 42-50] and a second encoded signal representing the content using encoding relatively more robust than the encoding of the first encoded content representative signal, [fig. 3; fig. 5 (5a, 5b); col. 9 lines 5-14, 42-50] wherein the first encoded signal is delayed with respect to the second encoded signal, [abstract; fig. 3; fig. 5; col. 8 line 56 - col. 9 line 1-19 (emphasis col. 9 lines 9-14)] and the first encoded signal and second encoded signal are multiplexed in the time domain, [col. 9 line 40 - col. 10 line 21] a demultiplexer [fig. 6 (14); fig. 7 (14)], coupled to the input terminal, for extracting a received first encoded signal and a received second encoded signal, [figs. 6-7; col. 10 lines 22-67; col. 12 lines 30-67] and for generating a signal indicating an error in the composite signal; [fig. 7 (13); fig. 6 (13); col. 10 lines 46-65; col. 12 lines 40-67] a decoder, [fig. 6 (15a, 15b); col. 10 lines 32-40, 53-65; fig. 7(15a, 15b); col. 12 lines 32-66] coupled to the demultiplexer [fig. 6 (14); fig. 7 (14)] and responsive to the error signal, [fig. 6; fig. 7] for decoding the received second encoded signal if an error is detected in the composite

signal and decoding the received first delayed encoded signal otherwise. [fig. 6; fig. 7; col. 10 lines 46 - col. 11 lines 667; col. 11 lines 36-55]

8. As to claim 12, Matsushima teaches a system decoder, coupled to the channel decoder, for depacketizing the channel decoded received second encoded signal using MPEG 2 packet format; [col. 9 lines 30-39; fig. 3; fig. 6; fig. 7; col. 9 lines 5-14, 42-56; col. 10 lines 22-67] and a source decoder, [fig. 6 (12); fig. 7 (12); col. 10 lines 22-67; col. 12 lines 30-65] coupled to the system decoder, [fig. 7 (15(a) and 15(b)); fig. 6 (15(a) and 15(b))] for decoding the channel and system decoded received second encoded signal using JVT decoding. [figs. 6-7; col. 9 lines 30-39 – discloses or the like which is suitable for digital broadcast which inherently includes JVT]

9. As to claim 13, Matsushima teaches the steps of: receiving a composite signal [fig. 6; fig. 7 (41); col. 12 lines 30-67] comprising a first encoded signal representing content [fig. 3; fig. 5 (5a, 5b); col. 9 lines 5-14, 42-50] and a second encoded signal representing the content using encoding relatively more robust than the encoding of the first encoded content representative signal, [fig. 3; fig. 5 (5a, 5b); col. 9 lines 5-14, 42-50; encoder encodes the second signal with a robust technique being a lower quality encoding] wherein the first encoded signal is delayed with respect to the second encoded signal, [abstract; fig. 3; fig. 5; col. 8 line 56 - col. 9 line 19 (emphasis col. 9 lines 9-14 - the signal is delayed] and the first encoded signal and second encoded signal are multiplexed in the time domain; [col. 9 line 40 - col. 10 line 21] extracting a received first encoded signal and a received second encoded signal, [figs. 6-7; col. 10 lines 22-67; col. 12 lines 30-67] generating a signal indicating an error in the composite

signal; [fig. 7 (13); fig. 6 (13); col. 10 lines 46-65; col. 12 lines 40-67] decoding the received second encoded signal if an error is detected in the composite signal, fig. 5 (1, 2, 5b); col. 9 lines 1-19] and decoding the received first delayed encoded signal otherwise. [fig. 5 (1 and 4); fig. 7 (1 and 4); col. 9 lines 5-19]

10. As to claim 14, Matsushima teaches wherein said encoded first and second signals are channel encoded. [fig. 3; fig. 5 (5a, 5b); fig. 7; col. 9 lines 5-14, 42-56]

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 3-6 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsushima et al. US 6,535,717 in view of Birru et al. US 2002/0181581.

13. As to claim 3, Matsushima teaches the limitations of claim 2 above.

Matsushima does not explicitly teach the step of modulating the source and system encoded content representative signal using 8-VSB modulation.

Birru teaches the step of modulating the source and system encoded content representative signal using 8-VSB modulation. [abstract; fig. 2; fig. 4; ¶ 0018-0020; ¶ 0029-0031]

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the VSB teachings of Birru with the staggercasting device of Matsushima allowing for backward compatibility with existing receivers. [Birru - ¶ 0012]

14. As to claim 4, Matsushima (modified by Birru) teaches the step of encoding the content representative signal using MPEG 2 encoding; [Matsushima - col. 9 lines 30-39; fig. 7; fig. 5; Birru - abstract; fig. 2; fig. 4; ¶ 0018-0020; ¶ 0029-0031] and the step of system encoding the first content representative signal comprises the step of packetizing the source encoded content representative signal using MPEG 2 format packets. [Matsushima - col. 9 lines 30-39; fig. 7; fig. 5; Birru - abstract; fig. 2; fig. 4; ¶ 0018-0020; ¶ 0029-0031]

15. As to claim 5, Matsushima teaches the limitations of claim 2 above.

Matsushima does not explicitly teach the step of channel encoding the second content representative signal comprises the step of modulating the source and system encoded content representative signal using one of 4-VSB or 2-VSB modulation.

Birru teaches the step of channel encoding the second content representative signal comprises the step of modulating the source and system encoded content representative signal using one of 4-VSB or 2-VSB modulation. [Birru - abstract; fig. 2; fig. 4; ¶ 0018-0020; ¶ 0029-0031]

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the VSB teachings of Birru with the staggercasting device of Matsushima allowing for backward compatibility with existing receivers. [Birru - ¶ 0012]

16. As to claim 6, Matsushima (modified by Birru) teaches the step of source encoding the second content representative signal comprises the step of encoding the content representative signal using JVT encoding; [Matsushima - figs. 5; fig. 7; col. 9 lines 30-39 – discloses or the like which is suitable for digital broadcast which inherently includes JVT] and the step of system encoding the second content representative signal comprises the step of packetizing the source encoded content representative signal using MPEG 2 format packets. [col. 9 lines 30-39; fig. 3; fig. 5 (5a, 5b); fig. 7; col. 9 lines 5-14, 42-56]

17. As to claim 9, Matsushima (modified by Birru) teaches the decoder comprises a channel decoder, responsive to the received first encoded signal, for demodulating the received first encoded signal using 8-VSB demodulation. [Birru - abstract; fig. 2; fig. 4; ¶ 0018-0020; ¶ 0029-0031]

18. As to claim 10, Matsushima teaches a system decoder, coupled to the channel decoder, for depacketizing the channel decoded received first encoded signal using an MPEG 2 packet format; [col. 9 lines 30-39; fig. 3; fig. 6; fig. 7; col. 9 lines 5-14, 42-56; col. 10 lines 22-67] and a source decoder, fig. 6 (12); fig. 7 (12); col. 10 lines 22-67; col. 12 lines 30-65] coupled to the system decoder, [fig. 7 (15(a) and 15(b)); fig. 6 (15(a) and 15(b))] for decoding the channel and system decoded received first encoded signal using MPEG 2 decoding. [col. 9 lines 30-39; fig. 3; fig. 6; fig. 7; col. 9 lines 5-14, 42-56; col. 10 lines 22-67]

19. As to claim 11, Matsushima teaches the limitations of claim 8 above.

Matsushima does not explicitly teach a channel decoder, responsive to the received second encoded signal, for demodulating the received second encoded signal using one of 4-VSB or 2-VSB demodulation.

Birru teaches a channel decoder, responsive to the received second encoded signal, for demodulating the received second encoded signal using one of 4-VSB or 2-VSB demodulation. [Birru - abstract; fig. 2; fig. 4; ¶ 0018-0020; ¶ 0029-0031]

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the VSB teachings of Birru with the staggercasting device of Matsushima allowing for backward compatibility with existing receivers. [Birru - ¶ 0012]

Conclusion

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANNER HOLDER whose telephone number is (571)270-1549. The examiner can normally be reached on M-W, M-W 8 am-3 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Ustaris can be reached on 571-272-7383. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Anner Holder/
Examiner, Art Unit 2483

/Tung Vo/
Primary Examiner, Art Unit 2483